

RAISING NDC AMBITION TO IMPROVE AIR QUALITY IN THE DOMINICAN REPUBLIC

Recommendations for combined climate change and air pollution mitigation measures

Stockholm Environment Institute (SEI) and Climate and Clean Air Coalition (CCAC)

- Country: Dominican Republic
- Co-Benefit: Air Quality and Health
- Method: LEAP-IBC
- Assessment by: Dominican Republic
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NDC measures in the Dominican Republic

The Nationally Determined Contribution of the Dominican Republic lists climate change mitigation policies that will achieve its climate change commitment. Some of these actions can simultaneously improve outdoor air quality by reducing emissions of short-lived climate pollutants (SLCPs) and other air pollutants. Considering these synergies in climate mitigation planning offers opportunities to improve public health.

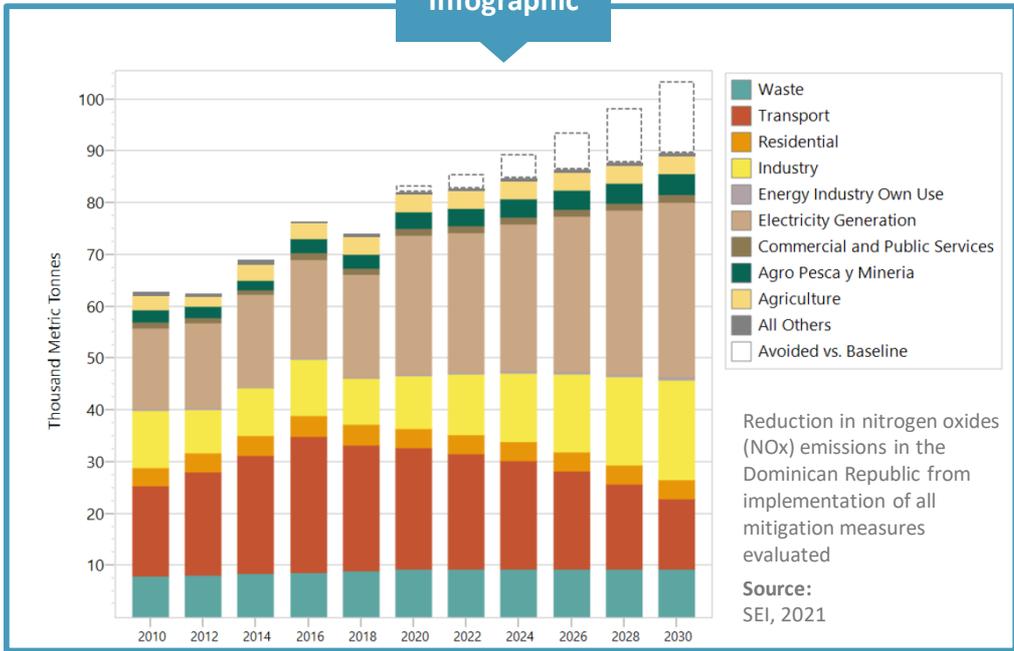
This study assesses for the first time the magnitude of emissions of SLCPs and air pollutants in the Dominican Republic, and strategies for mitigation. Based on an emission inventory of SLCPs in the Dominican Republic, the potential of different climate change mitigation policies and measures was evaluated regarding their impacts on reducing SLCP emissions and thus ambient air pollution. Furthermore, the emission reduction potential until 2030 is quantified for six high-impact measures mitigating climate change impacts while reducing ambient air pollution in the Dominican Republic.



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Infographic



Indicators assessed

- Emission of short-lived climate pollutants (SLCPs), greenhouse gases (GHGs) and air pollutants by source
- Projections of SLCPs, air pollutants and greenhouse gases to 2030 (baseline scenario and mitigation activities added)



Methodology

Using data on energy consumption, electricity generation, agricultural production and waste management systems in Dominican Republic, the authors developed an integrated short-lived climate pollutant (SLCP), greenhouse gas (GHG) and air pollutant emission **inventory** to characterize the emissions of various pollutants.

These emissions were then projected for a **baseline** scenario to 2030. **Additional policies and measures were then identified** that are not included in existing plans and strategies. They were extracted from global and regional assessments where they are listed as key mitigation measures.

The **LEAP-IBC tool** was then applied to carry out an integrated assessment of greenhouse gases, short-lived climate pollutants and air pollutants based on the latest available national data.

Key findings

- Major sources of black carbon emissions are residential combustion, industry, transport and waste burning. Industrial use of biomass fuels cannot be quantified due to a lack of emission control technologies but may be large black carbon emission source.
- Raising the ambition of the NDCs of the Dominican Republic through the full implementation of the six proposed measures reduces emissions of black carbon by an estimated 6% in 2030. Mitigation measures would also be effective in reducing other GHGs emissions such as CO₂ (23% in 2030 compared to a baseline scenario)
- Added mitigation measures that target an increase in the fraction of power generated from renewables and a decrease in the age of the vehicle fleet result in a combined 20% reduction of NO_x emissions in 2030 compared to a baseline scenario.
- As individual mitigation measure, an increase of the proportion of electricity generated from renewable sources is a highly effective measure to reduce carbon dioxide emissions and other air pollutant emissions in the Dominican Republic

Recommendations

- GHG, air pollutant and SLCP emissions shall be monitored, evaluated and reported simultaneously to make use of existing synergies. Thus, integrated climate change and air pollution mitigation analyses needs to be maintained and updated, while air pollutant and SLCP emissions shall be included in the official GHG inventory, the National Communications and Biennial Reports.
- In the Dominican Republic, pollutants contributing to air pollution, and climate change are often emitted from the same sources. Integrating air pollution and climate change planning by identifying strategies having the potential to simultaneously achieve both thus offer great synergies.
- Mitigation actions maximizing SLCP and air pollutant emission reductions shall be included into the NDC revision, together with estimations quantifying their individual emission reduction potentials.
- The establishment of an inter-sectoral or inter-ministerial task force can support climate change and air pollutant mitigation actions alike by serving as a forum to discuss and engage relevant stakeholders relevant to tackle both challenges



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